



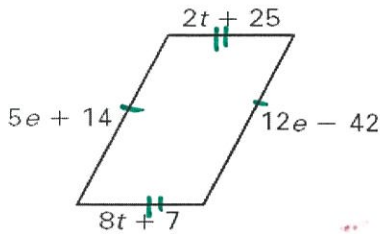
Name: _____
 Mr. Tiénou-Gustafson & Mr. Bielmeier
 Geometry, Period _____
 Due Date: Wed, 18 Mar 2015

HW121 Types of Parallelograms

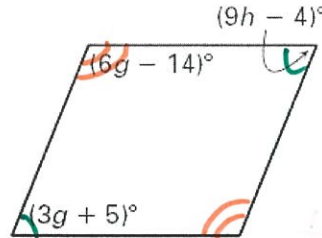
**Geometry
Homework**

Failure to show all work and write in complete sentences will result in LaSalle!

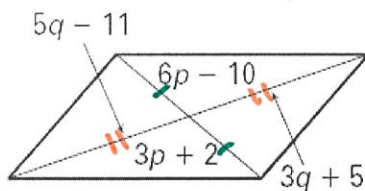
1) Find the value of each variable in the parallelogram.



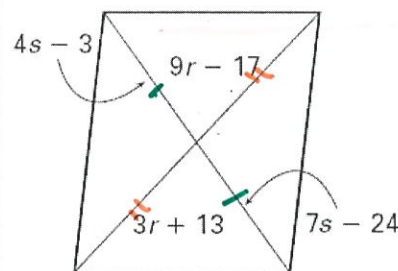
2) Find the value of each variable in the parallelogram.



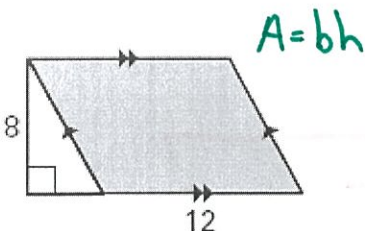
3) Find the value of each variable in the parallelogram.



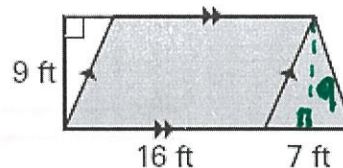
4) Find the value of each variable in the parallelogram.



6) Find the area of the parallelogram. (shaded region only)



7) Find the area of the shaded polygon.
 Total shaded = shaded parallelogram + shaded triangle



8) If the area of a square is 49 m^2 . How long is the diagonal of the square? Draw & show all work.

$$A = l \cdot w = s^2$$

$$49 = s^2$$

$$= 7$$



10) For a given rectangle, the length is 6 units longer than the width. If the perimeter of the rectangle is 44 units. Find the area of the rectangle. Draw & show all work.



Types of Parallelograms Exploration

If you can prove one of the following about a quadrilateral, this is enough to prove it is a parallelogram:

(1) opposite sides are parallel, (2) opposite sides are congruent, or (3) opposite angles are congruent.

For the 3 figures below, use any of the methods above to prove that it is a parallelogram. Each figure has an additional property (of angles and/or sides) that is not true of all parallelograms. Find this property! (For example, for figure 1, you could show that not only are opposite sides congruent, proving it is a parallelogram, but also the long side is twice the length of the short side. Now you can't use this relationship!)

Figure 1

What type of shape do you think this is? _____

Is this a parallelogram? Yes Prove it! (Method of your choice)

$$m_{AB} = \frac{4-2}{3-(-5)} = \frac{2}{8} = \frac{1}{4} \quad \text{reason: opp sides are parallel}$$

$$m_{DC} = \frac{0-(-2)}{4-(-4)} = \frac{2}{8} = \frac{1}{4}$$

~~What is one other property that is true about the side or angle relationships? Show work to demonstrate this.~~

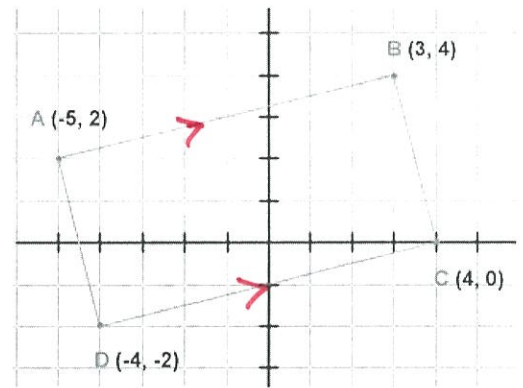
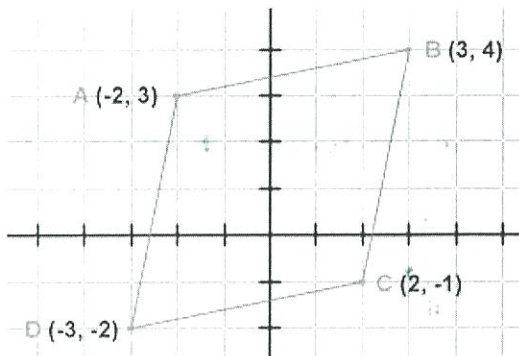


Figure 2

What type of shape do you think this is? _____

Is this a parallelogram? _____ Prove it! (Method of your choice)



~~What is one other property that is true about the side or angle relationships? Show work to demonstrate this.~~

Figure 3

What type of shape do you think this is? _____

Is this a parallelogram? _____ Prove it! (Method of your choice)

~~What is one other property that is true about the side or angle relationships? Show work to demonstrate this.~~

